

Amendments to the Claims

1. (currently amended) A device comprising:

a Digital Signal Processor (DSP) module enabled to receive an analog telephone signal to convert the analog telephone signal to a digital telephone signal and further to packetize the digital telephone signal for transmission to a remotely-located device;

the device and the remotely-located device enabled to negotiate a first type of codec by each sending to the other a list of one or more types of codecs that each supports and each deciding to use a mutually supported codec through the use of a predetermined protocol; and

during communications between the remotely-located device and the DSP module, the DSP module enabled to renegotiate ~~the use of~~ a second type of codec, wherein the renegotiation is triggered upon detection of degradation in voice quality by the remote device, and

the DSP module to dynamically switch to using the second codec only if the device determines that the second codec is available therein upon detection of signal degradation based on statistics from the DSP module,

wherein, the type of codec being utilized may be repeatedly, mutually, renegotiated to dynamically change compression techniques and switching between the codecs is performed during a call.

2. (previously presented) A device as recited in claim 1 wherein switching between the codecs is initiated by a user of one of the telephone devices.

3. (previously presented) A device as recited in claim 2 wherein a predetermined code is assigned to correspond to each codec wherein the user specifies the type of codec to be switched to by entering the predetermined code corresponding to a desired codec.

4. (previously presented) A device as recited in claim 3 wherein the

predetermined code is programmably-alterable.

5. (previously presented) A device as recited in claim 1 further comprising the device enabled to switch from a codec resulting in the use of larger packet sizes to a codec resulting in smaller packet sizes in response to detecting a lower available bandwidth on a packet switching network.

6. (previously presented) A device as recited in claim 5 wherein the device is configured to automatically detect the lower bandwidth.

7. (previously presented) A device as recited in claim 1 wherein upon detecting higher bandwidth available on packet switching network, the device is enabled to switch from a codec resulting in the use of smaller packet sizes to a codec resulting in higher packet sizes.

8. (previously presented) A device as recited in claim 5 wherein the device is enabled to automatically detect the higher bandwidth.

9. (previously presented) A device as recited in claim 1 wherein the remotely-located device is enabled to detect the degradation in the quality of the voice information.

10. (previously presented) A device as recited in claim 1 wherein the degradation in the quality of the voice information is due to loss of one or more packets.

11. (previously presented) A device as recited in claim 10 wherein a threshold defines the number of lost packets that are tolerated and the device is enabled to trigger a decision to switch to the second type of codec.

12. (previously presented) A device as recited in claim 11 wherein a plurality of packets form a message and each packet includes a sequence number indicative of the position of the packet with respect to other packets in the same message, the sequence numbers of the same

message being in sequential order wherein a loss of packets is detected when one or more sequence numbers are missing from the received packets of the same message.

13. (previously presented) A device as recited in claim 1 wherein the degradation in the quality of the voice information is due to an intolerable delay associated with the time for a packet to travel between the device and the remotely located device.

14.-16. (canceled)

17. (currently amended) A method comprising:
receiving at a first router an analog telephone signal through a telephone connection from a first telephone device;

converting the analog telephone signal to a digital telephone signal;

separating information carried on the digital telephone signal into packets of information;

initially, mutually, negotiating with a second router a first type of codec for communication with a second telephone device, by each sending to the other one or more types of codecs that each supports and each deciding to use a mutually supported codec through the use of a predetermined protocol;

using a first type of codec for transferring the packets of information between the first and second router through a packet switching network;

during communication between the telephone devices, the first and second router renegotiating the use of a second type of codec, wherein the renegotiation is triggered upon detection of degradation in voice quality by the second router;

switching to using the second type of codec only if the first router determines that the second codec is available therein ~~upon detection of degradation in the quality of the voice information during the course of the telephone connection;~~ and

during communication between the telephone devices, upon further detection of ~~signal~~ degradation in voice quality by the second router, repeatedly renegotiating to dynamically change compression.

18. (previously presented) A device as recited in claim 1 wherein the codec negotiation is performed pursuant to the H.245 protocol.

19. (previously presented) A device as recited in claim 1 wherein the first type of codec includes a compression/decompression algorithm defined by any one of the standards: G.711, G726, G729 or G723.1 and the second type of codec utilizes a compression/decompression algorithm defined by any one of the standards: G.711, G726, G729 or G723.1.

20. (canceled)